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7 UNITED STATES DISTRICT COURT
8 WESTERN DISTRICT OF WASHINGTON
9 AT SEATTLE

10 MICROSOFT CORPORATION,

11 Plaintiff,

12 v.

13 MOTOROLA INC., et al.,

14 Defendants.

15 MOTOROLA MOBILITY, INC., et
16 al.,

17 Plaintiffs,

18 v.

19 MICROSOFT CORPORATION,

20 Defendant.
21
22

CASE NO. C10-1823JLR

ORDER ON
CLAIM CONSTRUCTION

I. INTRODUCTION

This is an order on claim construction in a patent infringement action involving three patents related to systems and methods for decoding encoded digital video data. Each of the patents relates to the H.264 video compression standard.¹ (Dkt. # 77 (Microsoft’s Mot. Part. S.J.) at 9-10.) Plaintiffs Motorola Mobility, Inc. and General Instrument Corporation (collectively, “Motorola”) sued Defendant Microsoft Corporation (“Microsoft”) for infringement of claims 8-18 of United States Patent No. 7,310,374 (“the ’374 Patent”), claims 6-11, 13, 14, 16, and 17 of United States Patent No. 7,310,375 (“the ’375 Patent”), and claims 14-15, 18-20, 22, 23, 26-28, and 30 of United States Patent No. 7,310,376 (“the ’376 Patent”) (collectively, the “Patents-in-Suit”).² The court has considered the parties’ briefing and supporting materials and has heard oral argument from the parties at a *Markman* hearing held on March 9, 2012. This order memorializes the court’s construction of the disputed terms of the Patents-in-Suit.

¹ The International Telecommunication Union, jointly with two other organizations—the International Organization for Standardization and the International Electrotechnical Commission—developed the H.264 video compression standard. (Microsoft’s Mot. Part. S.J. at 9-10.)

² This matter has a complex procedural history. Originally, the parties were involved in two separate actions, one in which Microsoft was the plaintiff, No. C10-1823JLR, and one in which Motorola was the Plaintiff, No. C11-0343JLR. On June 1, 2011, the court consolidated the two cases under Cause No. C10-1823JLR. (Dkt. # 66 at 12.) Because the patents at issue in this order are asserted by Motorola, the court refers to Motorola as the plaintiff and Microsoft as the defendant.

II. BACKGROUND

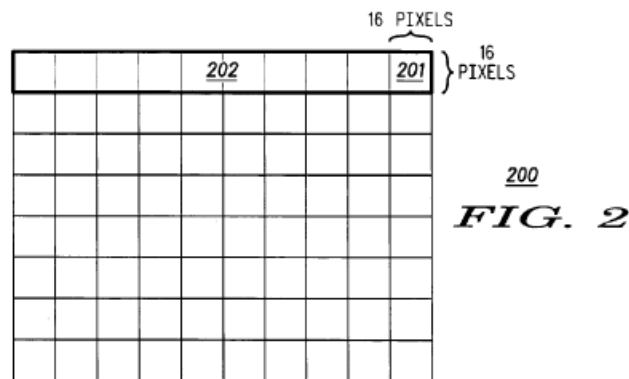
Motorola is the sole assignee of each of the Patents-in-Suit. (*See* '374 Patent; '375 Patent; '376 Patent.) Each of the Patents-in-Suit shares a common specification.³ (*See id.*) Motorola contends that each Microsoft Windows 7 operating system and each Microsoft Internet Explorer 9 that are made, used, sold, or offered for sale in the United States or imported into the United States by Microsoft infringes the asserted claims of the Patents-in-Suit. (Jt. Claim Constr. Statement (Dkt. # 170) at 5.) Motorola asserts that Microsoft's products infringe the Patents-in-Suit both directly and indirectly. (*Id.*)

The Patents-in-Suit disclose systems and methods for encoding and decoding digital video data. (*See generally* '374 Patent, '375 Patent, and '376 Patent.) The asserted claims of the Patents-in-Suit, however, only relate to systems and methods of decoding already encoded data. (*See* asserted claims of '374, '375, and '376 Patents.) The encoding of video data consists of compressing data comprising a stream of pictures. (Dr. Drabik Tutorial (Dkt. # 256) at 7.) The decoding of video data consists of decompressing the already encoded stream of pictures. (*Id.* at 8.) As an example, in operation, a video camera may capture a stream of pictures and send it to an encoder, which compresses the data comprising the stream of pictures. (*Id.* at 9.) This encoded, compressed data can be transmitted to another device and/or stored in computer memory. (*Id.*) In its compressed form, the data takes up less space in storage than uncompressed

³ For consistency and ease of reference, the court cites to the specification of the '374 Patent throughout this order.

1 data and requires less bandwidth for transmission. (*Id.*) For playback on a television
 2 screen (for example), the encoded data must be decoded or decompressed. (*Id.*)

3 In this described video coding process, each individual picture in the stream must
 4 be encoded and correspondingly decoded for playback. (Dr. Drabik Tutorial at 11.) The
 5 systems and methods disclosed in Patents-in-Suit divide the individual pictures into
 6 “macroblocks” which can be divided even further into “blocks” for efficient encoding
 7 and decoding. (See ’374 Patent at 5:59-64.) Figure 2 of the ’374 Patent shown below
 8 illustrates an entire picture divided into macroblocks, which are shown as number 201.



14 As explained in more detail below, the Patents-in-Suit encode and decode video data at a
 15 macroblock level.

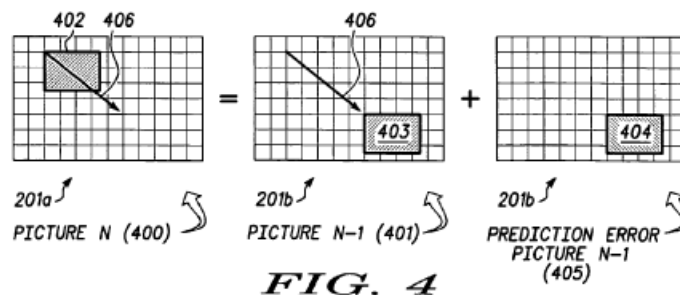
16 The Patents-in-Suit utilize what is referred to as “interlaced video.” (’374 Patent
 17 at 4:17-34.) Picture frames are typically made up of lines of video data horizontally
 18 displayed across the screen. Interlaced video operates by first scanning the odd lines of
 19 the picture and then scanning the even lines, 1/60th of a second later. (Dr. Drabik
 20 Tutorial at 38.) Within a macroblock, two fields are created: a top field, and a bottom
 21 field. (’374 Patent at 6:65-67.) In operation, the top field may consist of the scanned odd
 22

1 lines and the bottom field may consist of the scanned even lines. (Dr. Drabik Tutorial at
2 41.)

3 According to the Patents-in-Suit, compression of data can be optimized through
4 various encoding mechanisms designed to provide increased compression without
5 sacrificing accuracy. One such mechanism is determining whether to encode both fields
6 of the macroblock jointly or separately. The Patents-in-Suit refer to joint encoding of the
7 macroblock fields as “frame mode” coding and refer to separate encoding of the
8 macroblock fields as “field mode” coding. (’374 Patent at 6:45-47.) Depending on the
9 data of a stream of picture frames, better compression may be achieved through encoding
10 in one mode over the other. (’374 Patent at 6:49-55.) The Patents-in-Suit disclose the
11 encoding methodology named “adaptive frame/field” coding (“AFF Coding”), where the
12 “encoder determines which mode, frame mode or field mode, to encode each picture in
13 the stream of pictures based on the contents of the digital video material” to maximize
14 compression. (*Id.*)

15 Once encoded by frame mode or field mode, the macroblock can be further
16 divided into smaller blocks for use in a prediction algorithm, which further compresses
17 the data. (*See id.* at 7:1-3.) In a prediction algorithm, to maximize compression in the
18 encoding process, only some picture frames will be fully encoded whereas other picture
19 frames will be predicted based on the fully encoded reference picture. The Patents-in-
20 Suit disclose three types of picture frames for use in prediction algorithms designed to
21 minimize redundancy during the encoding process: Intra pictures, predicted pictures, and
22 bi-predicted pictures. (*Id.* at 5:4-11.) Intra pictures are encoded without referring to

reference pictures, and therefore can be encoded only with slight compression. (*Id.* at 5:11-15.) Predicted pictures are encoded by an intra picture, predicted picture, or bi-predicted picture that has already been encoded as a reference picture—the reference picture can be in either the forward or backward temporal direction in relation to the predicted picture. (*Id.* at 5:16-21.) Bi-predicted pictures are encoded using two temporal reference pictures, one forward and one backward. (*Id.* at 5:22-25.) The Patents-in-Suit extend the described method of prediction via reference pictures to a macroblock (and even block) level. (*See id.* at 6:10-24.) Thus, in the present invention, a macroblock may act as a reference picture, and macroblocks will be predicted from reference macroblocks. (*Id.*) During encoding, predicted macroblocks are represented by a vector estimating the amount of temporal motion of the image(s) with respect to the reference macroblock. (*Id.* at 6:25-31.) Figure 4 below illustrates the use of a motion vector, numbered 406, to indicate the motion of an image, numbered 402 as it moves from picture frame to picture frame. ('374 Patent at Figure 4.)



The Patents-in-Suit also disclose that the motion vectors themselves may be encoded by referencing other motion vectors. (*Id.* at 9:38-45.) This method of utilizing reference macroblocks to predict other macroblocks is referred to by the Patents-in-Suit as “inter

coding.” (*Id.* at 9:11-15.) The Patents-in-Suit also describe “intra coding,” where macroblocks are predicted based on neighboring macroblocks within the same picture frame, as opposed to using temporarily distinct picture frames as reference macroblocks. (*Id.*)

The Patents-in-Suit describe various methods for decoding data that has been encoded utilizing various combinations of the above-described encoding options. The language of claim 8 of the ’374 Patent, a heavily disputed term, is representative of many of the claims at issue and reads as follows:

8. A method of decoding an encoded picture having a plurality of smaller portions from a bitstream, comprising:

decoding at least one of said plurality of smaller portions at a time in frame coding mode and at least one of said plurality of smaller portions at a time in field coding mode, wherein each of said smaller portions has a size that is larger than one macroblock, wherein at least one block within said at least one of said plurality of smaller portions at a time is encoded in inter coding mode; and

using said plurality of decoded smaller portions to construct a decoded picture.

(’374 Patent, Claim 8.)

III. DISCUSSION

A. Legal Standard

In *Markman v. Westview Instruments, Inc.*, the Supreme Court placed sole responsibility for construing patent claims on the court. 517 U.S. 370, 372 (1996). The Federal Circuit later established that the court construes claims purely as a matter of law. *Cybor Corp. v. FAS Tech., Inc.*, 138 F.3d 1448, 1456 (Fed. Cir. 1998) (applying *de novo*

1 review to all claim construction issues, even “allegedly fact-based questions”).
2 Executing the *Markman* mandate requires a court to interpret claims after giving the
3 appropriate level of consideration to various sources of evidence.

4 Intrinsic evidence, which includes the patent and its prosecution history, is the
5 primary source from which to derive a claim’s meaning. *Phillips v. AWH Corp.*, 415
6 F.3d 1303, 1314 (Fed. Cir. 2005) (en banc). A patent is composed of three parts: (1) a
7 “written description,” which consists of an often lengthy exposition of the background of
8 the invention, at least one embodiment of the invention, and other written material that
9 assists in understanding how to practice the invention; (2) (in most cases) a set of
10 drawings that illustrates portions of the written description; and (3) the claims, which
11 delimit the scope of the invention. *General Foods Corp. v. Studiengesellschaft Kohle*
12 *mbH*, 972 F.2d 1272, 1274 (Fed. Cir. 1992). Together, these three components make up
13 the patent’s “specification.”⁴ *Atmel Corp. v. Information Storage Devices, Inc.*, 198 F.3d
14 1374, 1384 (Fed. Cir. 1999); 35 U.S.C. § 112.

15 The prosecution history exists independently of the patent. It consists of the
16 inventor’s application to the United States Patent and Trademark Office (“PTO”) and all
17 correspondence between the PTO and the inventor documenting the invention’s progress
18 from patent application to issued patent. *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d
19 1576, 1582 (Fed. Cir. 1996).

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21 ⁴ Although 35 U.S.C. § 112 includes the claims as part of the specification, many courts
22 and practitioners use the term “specification” to refer to all portions of a patent except the claims.
In most instances, the context will reveal what portion of the specification is at issue.

1 In its review of intrinsic evidence, the court begins with the language of both the
2 asserted claim and other claims in the patent. *Phillips*, 415 F.3d at 1314; *Biagro Western*
3 *Sales, Inc. v. Grow More, Inc.*, 423 F.3d 1296, 1302 (Fed. Cir. 2005) (“It is elementary
4 that claim construction begins with, and remains focused on, the language of the
5 claims.”). The court’s task is to determine the “ordinary and customary meaning” of the
6 terms of a claim through the eyes of a person of ordinary skill in the art on the filing date
7 of the patent. *Phillips*, 415 F.3d at 1313 (quoting *Vitronics*, 90 F.3d at 1582).
8 Sometimes, the ordinary meaning is “readily apparent even to lay judges,” in which case
9 claim construction “involves little more than the application of the widely accepted
10 meaning of commonly understood words.” *Id.* at 1314.

11 The court must read claim language, however, in light of the remainder of the
12 specification. *Id.* at 1316 (“[T]he specification necessarily informs the proper
13 construction of the claims.”). In cases where the ordinary meaning of a claim term seems
14 apparent from its use in the claim, the court must consult the specification either to
15 confirm that meaning or to establish that the inventor intended a different meaning.
16 *Superguide Corp. v. DirecTV Enters., Inc.*, 358 F.3d 870, 875 (Fed. Cir. 2004). If the
17 ordinary meaning is not apparent from its use in the claim, the court looks to the
18 specification to provide meaning. *Johnson Worldwide Assocs., Inc. v. Zebco Corp.*, 175
19 F.3d 985, 990 (Fed. Cir. 1999). The specification acts as a “concordance” for claim
20 terms, and is thus the best source beyond claim language for understanding claim terms.
21 *Phillips*, 415 F.3d at 1315. The inventor is free to use the specification to define claim
22 terms as she wishes, and the court must defer to an inventor’s definition, even if it is

1 merely implicit in the specification. *Id.* at 1316 (“[T]he inventor’s lexicography
2 governs.”), 1320-21 (noting that a court cannot ignore implicit definitions). The court
3 should “rely heavily” on the specification in interpreting claim terms. *Id.* at 1317.

4 When the court relies on the specification, however, it must walk a tightrope
5 between properly construing the claims in light of the written description and the
6 “cardinal sin” of improperly importing limitations from the written description into the
7 claims. *SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337,
8 1340 (Fed. Cir. 2001); *Phillips*, 415 F.3d at 1323 (citing *Comark Commc’ns, Inc. v.*
9 *Harris Corp.*, 156 F.3d 1182, 1186-87 (Fed. Cir. 1998)). A patentee often provides
10 examples or “embodiments” of his or her invention in the written description, but courts
11 may not limit the invention to an embodiment absent clear evidence that a patentee
12 “intends for the claims and the embodiments . . . to be strictly coextensive.” *Phillips*, 415
13 F.3d at 1323.

14 Although a patent’s prosecution history is also intrinsic evidence, it is “less useful
15 for claim construction purposes,” because it usually “lacks the clarity of the
16 specification.” *Id.* at 1317. The prosecution history is useful, however, in determining if
17 an inventor has disavowed certain interpretations of his or her claim language. *Id.*

18 Finally, the court can consider extrinsic evidence, “including expert and inventor
19 testimony, dictionaries, and learned treatises.” *Id.* (citing *Markman v. Westview*
20 *Instruments, Inc.*, 52 F.3d 967, 980 (Fed. Cir. 1995)). Extrinsic evidence is usually “less
21 reliable than the patent and its prosecution history” as a source for claim interpretation.
22 *Id.* at 1318. The court thus need not admit extrinsic evidence, but may do so in its

discretion if intrinsic evidence does not disclose the meaning of a claim term. *Id.* at 1319; *Vitronics*, 90 F.3d at 1583 (“[W]here the public record unambiguously describes the scope of the patented invention, reliance on any extrinsic evidence is improper.”). With this general framework in mind, the court turns to the claim terms in dispute.

B. Disputed Terms

The parties ask the court to construe the following three terms: (1) macroblock; (2) wherein at least one block within [said] at least one of said plurality of smaller portions [at a time] is encoded in inter coding mode; and (3) wherein at least one motion vector is received for said at least one block within at least one of said plurality of smaller portions.⁵

i. “macroblock”

The term “macroblock” appears in claims 8 and 14 of the ’374 Patent, claims 6, 13, and 17 of the ’375 Patent, and claims 14, 15, 18-20, 22, 23, 26-28, and 30 of the ’376 Patent. (’374, ’375, ’376 Patents.) The parties offer the following competing constructions.

Motorola’s Proposed Construction: “a picture portion comprising a 16 x 16 pixel region of luma and corresponding chroma samples.” (Motorola Opening Br. (Dkt. # 174) at 4.)

⁵ In the parties briefing prior to the *Markman* hearing, ten claim terms were in dispute. (See Microsoft Opening Br.; Motorola Opening Br.) The parties, however, were able to agree on seven terms on the eve of the *Markman* hearing, leaving three remaining terms for the court to construe in this order.

1 **Microsoft’s Proposed Construction:** “a rectangular group of pixels.”

2 (Microsoft Opening Br. (Dkt. # 170) at 9.)

3 Motorola’s proposed construction seeks to add two limitations not found in
4 Microsoft’s proposed construction: (1) that the macroblock be specifically 16 x 16 pixels
5 in size and (2) that the macroblock include luma and chroma samples. Microsoft argues
6 that the Patents-in-Suit and their shared specifications provide for a general construction
7 of the disputed term “macroblock” and that the court should not read into the disputed
8 term a preferred embodiment from the specification. (Microsoft Opening Br. at 9-12.)
9 For the reasons explained below, the court agrees with Microsoft.

10 First, Motorola argues that the specification supports its limiting construction.
11 Specifically, Motorola asserts that the Patents-in-Suit, through the specification,
12 incorporated by reference the definition of “macroblock” set forth in the Joint Final
13 Committee Draft of the MPEG-4 Part 10 AVC/H.264 standard (“H.264 Draft”), which
14 defined a macroblock as “16 x 16 luma samples and the two corresponding blocks of
15 chroma samples.” (Motorola Opening Br. at 4-5.) Motorola relies on the following
16 passage for the proposition that the Patents-in-Suit took the definition of “macroblock”
17 from the H.264 Draft:

18 The documents establishing the MPEG-4 Part 10 AVC/H.264 standard are
19 hereby incorporated by reference, including “Joint Final Committee Draft
20 (JFCD) of Joint Video Specification” issued by the Joint Video Team (JVT)
21 on Aug. 10, 2002.

22 (*Id.* (citing ’374 Patent at 4:37-41).)

1 The court is not persuaded that the specification incorporated by reference all of
2 the definitions set forth in the H.264 Draft. In the very next paragraph to that cited by
3 Motorola, the specification states the following:

4 Although this method of AFF encoding is compatible with and will
5 be explained using the MPEG-4 Part 10 AVC/H.264 standard guidelines, *it*
6 *can be modified and used as best serves a particular standard or*
7 *application.*

8 ('374 Patent at 4:48-51 (emphasis added).) This passage makes clear that the H.264
9 Draft was to be used as guidelines for explaining the technologies disclosed in the
10 Patents-in-Suit, but that the Patents-in-Suit may modify the H.264 Draft to suit a specific
11 application of the technology.

12 Indeed, the specification goes to great lengths to ensure that the 16 x 16 size is
13 merely the preferred size with the Patents-in-Suit not limited as such. For instance,
14 Figures 5 and 8 of the specification depict macroblocks with dimensions N x M, utilizing
15 an unknown variable as opposed to a specific 16 x 16 size. ('374 Patent at Figures 5 and
16 8.) Then, in describing the macroblock size, the specification states, “[a] *preferable*
17 *value of N and M is 16, making the macroblock a 16 by 16 pixel macroblock.*” (*Id.* at
18 7:8-10 (emphasis added).) Similarly, in a separate portion, the specification recites: “a
19 *preferable* macroblock size is 16 by 16 pixels.” (*Id.* at 5:57-58.) The use of the word
20 “preferable” used by specification when describing the size of the macroblock as 16 x 16
21 pixels indicates that although a 16 x 16 sized macroblock is preferable, the Patents-in-
22 Suit are not limited to such a size. *Dolbear v. American Bell Tel. Co.*, 126 U.S. 1, 538
(1888) (ruling that claim in Alexander Graham Bell’s telephone patent directed to the

1 process used in transmitting voice sounds telegraphically was not limited to the use of an
 2 electro-magnet apparatus, which was described in the patent as the preferred way, but
 3 also encompassed components based on variable resistance methods, that while not
 4 described in the specification, nonetheless could be used to carry out the claimed
 5 process)⁶; *DSW, Inc. v. Shoe Pavilion, Inc.*, 537 F.3d 1342, 1348 (Fed. Cir. 2008)
 6 (reversing summary judgment of noninfringement because district court erred in reading
 7 the preferred embodiment of a track and roller into the claim language). And, indeed, the
 8 only express definition found in the specification states that “a macroblock is a
 9 rectangular group of pixels.” (*Id.* at 5:56-58.) Had Motorola intended to specifically
 10 incorporate the 16 x 16 size from the H.264 Draft, it is illogical that it would have then
 11 used the specification to contradict the definition it purportedly incorporated.

12 Next, Motorola asserts that during prosecution of the '376 Patent, the examiner
 13 rejected the claims citing U.S. Patent No. 5,504,530 (“Obikane”), and to overcome this
 14 rejection, Motorola limited a “macroblock” to size 16 x 16 pixels. (Motorola Resp. Br.
 15 (Dkt. # 186) at 4.) Here, Motorola seeks to invoke the doctrine of prosecution disclaimer.
 16 *See Omega Eng’g. Inc. v. Raytek Corp.*, 334 F.3d 1314, 1323-25 (Fed. Cir. 2003).
 17 “[S]tatements made during prosecution may . . . affect the scope of the invention.”
 18 *Rexnord Corp. v. Laitram Corp.*, 274 F.3d 1336, 1343 (Fed. Cir. 2001). Specifically, “a
 19 patentee may limit the meaning of a claim term by making a clear and unmistakable

20
 21 ⁶ The *Dolbear* case stated: “It is undoubtedly true that when Bell got his patent he
 22 thought the magneto method was the best. Indeed, he said, in express terms, he preferred it; but
 that does not exclude the use of the other, if it turns out to be the most desirable way of using the
 process under any circumstances.” 126 U.S. 1, 538

1 disavowal of scope during prosecution.” *Purdue Pharma L.P. v. Endo Pharms., Inc.*, 438
2 F.3d 1123, 1136 (Fed. Cir. 2006). A patentee could do so, for example, by clearly
3 characterizing the invention in a way to try to overcome rejections based on prior art.
4 *See, e.g., Microsoft Corp. v. Multi-Tech Sys., Inc.*, 357 F.3d 1340, 1349 (Fed. Cir. 2004).

5 The court has reviewed the relevant prosecution history and finds that there has
6 been no clear and unmistakable disavowal of the scope of term “macroblock” such that it
7 should be limited in size as suggested by Motorola. In distinguishing the Obikane patent,
8 Motorola argued as follows:

9 Obikane does not disclose dividing a picture into a plurality of
10 macroblocks, each macroblock containing a plurality of blocks; generating
11 a plurality of processing blocks, each processing block including a plurality
12 of macroblocks including a pair of macroblocks or a group of macroblocks;
13 and selectively encoding at least one of said processing blocks in frame
14 coding mode and at least one of said processing blocks in field coding
15 mode, wherein said encoding is performed in a horizontal scanning path or
16 a vertical scanning path, as substantially recited by the above claims.
17 Obikane discloses an MPEG-2 approach in which encoding and decoding
18 are performed on a macroblock basis. The citations indicated by the
19 Examiner (col. 3: 10-30) merely discuss the formation of a macroblock as
20 having a plurality of smaller blocks. Obikane does not disclose to encoding
21 and decoding processes involving more than one macroblock and does not
22 disclose a scanning path to encode or decode plural macroblocks.

(Dkt. # 160-1 (Prosecution History) at 81.) Nothing in this passage from the prosecution
history suggests that Motorola clearly disavowed every dimension of a macroblock
besides 16 x 16. *Purdue*, 438 F.3d at 1136. Instead, at best, the passage suggests that
Motorola distinguished Obikane on the grounds that its invention performed encoding
and decoding on more than one macroblock at once. This reading of the prosecution
history is consistent with the examiner’s subsequent amendment to Motorola’s claims,

1 which added the phrase “at a time” in describing the simultaneous processing of multiple
2 blocks of data. (*See* Prosecution History at 87 (“decoding at least one of a plurality of
3 processing blocks at a time, each processing block containing a pair of macroblocks or a
4 group of macroblocks,”) (underlining in original).)

5 For the first time at oral argument, Motorola agreed that the above-cited passage
6 distinguished Obikane on the grounds that the Patents-in-Suits processed more than one
7 macroblock at a time, whereas Obikane had processed macroblocks individually.
8 (Transcript (Dkt. # 243) at 42.) Nevertheless, Motorola argued that because Obikane
9 disclosed a 16 x 16 macroblock size, if a macroblock could be smaller than 16 x 16, such
10 as 8 x 8, then a pair of macroblocks would be exactly the same size as disclosed in
11 Obikane and therefore indistinguishable. (*Id.* at 43.) Motorola’s convoluted argument
12 here does not comport with its argument during prosecution to distinguish the Obikane
13 prior art: “Obikane does not disclose to encoding and decoding processes involving more
14 than one macroblock.” (Prosecution History at 81.) The import of Motorola’s argument
15 at prosecution was that Obikane processed video data one macroblock at a time, whereas
16 the Patents-in-Suit would process more than one macroblock of video data at a time.
17 Thus, contrary to Motorola’s argument, it was the manner of processing, not the size of
18 the macroblock, that distinguished Obikane.

19 Further, the court notes that the above-cited passage demonstrates precisely the
20 concern identified by the *Phillips* Court that prosecution history often lacks the clarity of
21 the specification for the purpose of claim construction. *Phillips*, 415 F.3d at 1317. Here,
22 the court declines to read a passage from the prosecution history entirely without

1 reference to the size of a macroblock as constituting a clear disavowal of the size of a
2 macroblock to anything but 16 x 16 pixels.⁷

3 Finally, with respect to Motorola's proposed inclusion of luma and chroma
4 samples in the definition of "macroblock," as the court explained above, it is
5 unconvinced that the specification incorporated the definitions in the H.264 Draft for the
6 term "macroblock." Incorporation of the definitions in the H.264 Draft is Motorola's
7 only argument that construction of the disputed term "macroblock" should include luma
8 and chroma samples. The specification is entirely silent regarding luma and chroma
9 samples. Without more, the court declines to include luma and chroma samples into the
10 construction of the term "macroblock.

11 In sum, the court declines to read a preferred embodiment disclosed in the
12 specification into the term "macroblock," and instead finds that the specification broadly
13 defines the term. Accordingly, the court defines the term "macroblock" as: "a
14 rectangular group of pixels." This construction comports with the only express definition
15 of the term found in the specification. (*See* '374 Patent at 5:56-58 ("A macroblock (201)
16 is a rectangular group of pixels.").)

17
18 ⁷ At the *Markman* hearing, counsel for Motorola also argued to properly practice the
19 invention of the Patents-in-Suit of processing macroblocks, as well as smaller divisions of
20 macroblocks, through various processing techniques is to fix the size of a macroblock to the
21 disclosed embodiment of 16 x 16 pixels. (Transcript at 47.) This argument was not raised by
22 Motorola in its briefing. (*See* Motorola Opening Brief; Motorola Resp. Brief) The court,
however, has considered this argument and remains unconvinced. Contrary to Motorola's
assertion, a macroblock of size 64 x 64 could work the same way as a 16 x 16 macroblock. Such
a sized macroblock would be divided into four small blocks of 16 x 16, which could then be
processed just like the 16 x 16 macroblock Motorola submits is the only way to properly practice
the Patents-in-Suit.

1 **ii. wherein at least one block within [said] at least one of said plurality of**
2 **smaller portions [at a time] is encoded in inter coding mode**

3 The term-in-dispute appears in claims 8 and 14 of the '374 Patent. The parties
4 offer the following competing constructions.

5 **Motorola's Proposed Construction:** "wherein at least one block within [said] at
6 least one of said plurality of smaller portions [at a time] is encoded in inter coding mode,
7 a coding mode that uses information from both within the picture and from other
8 pictures." (Motorola Opening Br. at 9.)

9 **Microsoft's Proposed Construction:** "encoding at least one block within at least
10 one of said plurality of smaller portions at a time in inter coding mode." (Microsoft
11 Opening Br. at 25.)

12 The term in dispute is found in claims 8 and 14 of the '374 Patent. The parties
13 disagree about whether the language "is encoded" is descriptive of the state of the
14 claimed "at least one block" (Motorola's position) or whether it requires an additional
15 "encoding" step be performed (Microsoft's position). On this issue, the court agrees with
16 Motorola, but the court provides its own construction which it believes will assist the
17 finder-of-fact.

18 The court's analysis begins with the claim language. Importantly, the disputed
19 term is found as a limitation within a "method of *decoding* an *encoded* picture." ('374
20 Patent at Claim 8 (italics added).) This claim language indicates that the input to the
21 claimed method is an "encoded picture," and the function of the claimed method is to
22 decode that picture. From an operational standpoint, contrary to Microsoft's proposed

1 construction, it would make little sense for that an encoding step to occur during the
2 decoding process.

3 Moreover, Microsoft's reading of the disputed term simply does not align with the
4 natural reading of the claim language. First, the term-in-dispute is a "wherein" clause,
5 which the court finds indicative of a descriptive term, such that "is encoded in inter
6 coding mode" describes the state of the "at least one block." Second, the court finds that
7 had Motorola intended a separate encoding step, it would have used the gerund form of
8 the word as it did elsewhere in the Patents-in-Suit. For instance, to connote a step for
9 decoding the encoding picture, claim 8 used the word "decoding," and to connote a step
10 for using the decoded portions of video data to construct a decoded picture, claim 8
11 employed the word "using." Thus, it stands to reason that had Motorola sought a
12 separate "encoding" step, it would have stated "encoding at least one block . . . in inter
13 coding mode," as opposed to "wherein at least one block . . . is encoded in inter coding
14 mode."

15 For its part, Microsoft argues that the claims use a different term than the term-in-
16 dispute to identify the pre-existing state of being encoded. (Microsoft Opening Br. at
17 25.) Specifically, Microsoft asserts that claim 14 of the '374 Patent uses the phrase
18 "encoded picture that is encoded" to describe the state of being encoded. (*Id.* (citing '374
19 Patent at claim 14).) Microsoft juxtaposes this claim language with the term-in-dispute
20 which reads: "wherein at least one block . . . is encoded in inter coding mode," to argue
21 that the term in dispute must have a different meaning than the state of being encoded.
22 (*Id.* at 25.) The court disagrees with Microsoft's interpretation. The court finds little

1 difference in cited portions of claim language Microsoft attempts to juxtapose. Both
2 portions of the claim language utilize the phrase “is encoded,” which interpreted
3 consistently identifies the state of being encoded. What little difference exists is
4 attributable to the patentee’s efforts to provide, through its chosen claim language, clarity
5 to different steps of the patented invention.⁸

6 Although the court agrees with Motorola that the term-in-dispute describes the
7 state of “at least one block,” it finds Motorola’s proposed construction to be little more
8 than a regurgitation of the term as found in the claim and confusing to the finder-of-fact.
9 Accordingly, in an effort to provide guidance to the finder-of-fact, the court construes the
10 term-in-dispute as “where at least one block of the more than one smaller portions is
11 encoded in inter coding mode—a coding mode which uses information from both within
12 the picture and from other pictures.”

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17 ⁸ Additionally, Microsoft argues that the specification supports its inclusion into the
18 disputed term of a separate “encoding” step. Microsoft directs the court to the following passage
19 in the specification:

20 In intra coding, the macroblock is encoded without temporally referring to other
21 macroblocks. On the other hand, in inter coding, temporal prediction with motion
22 compensation is used to code the macroblocks.

(*Id.* at 26 (citing ’374 Patent at 9:11-15).) The court disagrees with Microsoft regarding
the import of this passage. The Patents-in-Suit disclose various processes for both encoding and
decoding. The passage cited by Microsoft refers to a disclosed process for encoding
macroblocks of a picture, which has little relevance to the term-in-dispute which is found in a
method of decoding the encoded picture.

1 **iii. wherein at least one motion vector is received for said at least one**
 2 **block within at least one of said plurality of smaller portions**

3 The term in dispute is found in claims 9 and 15 of '374 Patent. Claim 9 of the
 4 '374 Patent is a dependent claim to claim 8, and claim 15 of the '374 Patent is a
 5 dependent claim to claim 14. For instance, claim 9 reads: "The method of claim 8,
 6 wherein at least one motion vector is received for said at least one block within at least
 7 one of said plurality of smaller portions." ('374 Patent at claim 9.) The parties propose
 8 the following constructions.

9 **Motorola's Proposed Construction:** Motorola proposes that no construction is
 10 necessary for the term, but if the court chooses to construe the term, Motorola proposes:
 11 "wherein at least one value is received for said at least one block within at least one of
 12 said plurality of smaller portions, from which an amount of motion may be determined."
 13 (Motorola Opening Br. at 12.)

14 **Microsoft's Proposed Construction:** "receiving as part of the bitstream at least
 15 one value containing the amount of temporal motion required for the image to move to a
 16 new temporal position in the picture for each 'said at least one block within at least one
 17 of said plurality of smaller portions.'" (Microsoft Opening Br. at 26.)

18 The parties' proposed constructions demonstrate two central disagreements. First,
 19 the parties dispute whether the phrase "is received" adds an additional step of receiving
 20 the motion vector (Microsoft's position) or whether it merely requires the state of the
 21 encoded picture to include a motion vector (Motorola's position). (Motorola Opening Br.
 22 at 12; Microsoft Opening Br. at 26-27.) Second, the parties dispute whether the received

1 motion vector is a “value containing the amount of temporal motion required for the
2 image to move to a new temporal position” (Microsoft’s position) or merely a value
3 “from which an amount of motion may be determined” (Motorola’s position). (Motorola
4 Opening Br. at 12; Microsoft Opening Br. at 26-27.)

5 With respect to the parties’ first dispute, the court finds that the phrase “is
6 received” does not add an additional step of receiving the motion vector as a claim
7 limitation. Similar to the term-in-dispute in Section III.B.ii, the presently disputed term
8 is found in a “wherein” clause and does not employ the gerund form of the word, which
9 would indicate an active, additional step of “receiving.” (*See supra* § III.B.ii.) Thus, for
10 the same reasons the court found that the term-in-dispute in Section III.B.ii, did not
11 constitute a separate step of “encoding,” the court finds that the presently disputed term
12 does not constitute a separate step of “receiving.” (*See id.*)

13 With respect to second dispute, both parties cite to the same portion of the
14 specification describing motion vectors:

15 Each block in a frame or a field based macroblock can have its own motion
16 vectors. The motion vectors are spatially predictive coded. According to
17 an embodiment of the present invention, in inter coding, prediction motion
18 vectors (PMV) are also calculated for each block. The algebraic difference
between a block’s PMVs and its associated motion vectors is then
calculated and encoded. *This generates the compressed bits for motion
vectors.*

19 (’374 Patent at 9:38-45 (emphasis added).) This passage from the specification makes
20 clear that the motion vectors themselves, like the video data, may be compressed.

21 Importantly, claims 9 and 15 are dependent claims to a method for decoding an encoded
22 picture. Thus, it is logical that in operation the encoded picture would include both the

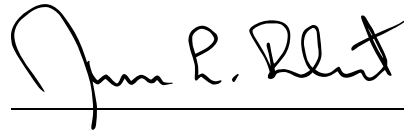
1 compressed video data as well as compressed motion vectors, as recited in the
2 specification. Encoding the motion vectors, in addition to the video data, would provide
3 additional compression, a goal of the claimed invention. The claimed decoding process
4 would then decode the encoded reference picture video data as well as the encoded
5 motion vectors to reconstruct the series of picture frames. Although the Patents-in-Suit
6 do not require that motion vectors be encoded or compressed (*see* '374 Patent at Claim
7 8), Microsoft's proposed construction forecloses the possibility of such an occurrence in
8 contravention to the specification.⁹ Thus, the court again agrees with Motorola that the
9 motion vector received is merely a value "from which an amount of motion may be
10 determined." (Motorola Opening Br. at 12.)

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20 ⁹ Microsoft argues that the cited passage of the specification distinguishes between
21 motion vectors and the values used to calculate them, and the claim language requires the motion
22 vector, not the values, to be sent. (Microsoft Opening Br. at 27.) Microsoft's explanation
ignores the teaching of the specification which explicitly explains that the values used to
calculate the motion vector may indeed be the encoded/compressed that constitute the motion
vector as received by the decoder. (*See* '374 Patent at 9:38-45.)

1 Again, Motorola's proposed construction is simply a regurgitation of the term as
2 found in the claim language, which the court finds facially confusing to the finder-of-fact.
3 To provide guidance to the finder-of-fact, the court construes the term-in-dispute as
4 "where at least one value, from which an amount of motion may be determined, is
5 received for a corresponding block(s). The block(s) are part of smaller portions."

6 It is so ORDERED.

7 Dated this 10th day of April, 2012.

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10 The Honorable James L. Robart
11 U.S. District Court Judge
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